

IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
Norfolk Division

DAEDALUS BLUE, LLC,	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 2:20CV551 (RCY)
	)	
MICROSTRATEGY INCORPORATED,	)	
Defendant.	)	
_____	)	

**MEMORANDUM OPINION**

This matter is before the Court on Defendant’s Motion for Summary Judgment (ECF No. 119) and the Special Master’s Report and Recommendation concerning the same (ECF No. 315). The Motion and Objections to the Report and Recommendation have been fully briefed, and the Court dispenses with oral argument because the facts and legal contentions are adequately presented in the materials before the Court, and oral argument would not aid in the decisional process. E.D. Va. Loc. Civ. R. 7(J). For the reasons stated below, the Court will adopt the Special Master’s Report and Recommendation and deny Defendant’s Motion for Summary Judgment.

**I. BACKGROUND**

At the outset, the Court notes that both Defendant’s Brief in Support of its Motion for Summary Judgment and its Brief in Opposition to Plaintiff’s Motion for Summary Judgment include specifically captioned sections listing all material facts that Defendant contends are undisputed or genuinely in dispute, respectively, as is required by E.D. Va. Loc. Civ. R. 56(B)<sup>1</sup>

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<sup>1</sup> Local Rule 56(B) provides:

Each brief in support of a motion for summary judgment shall include a specifically captioned section listing all material facts as to which the moving party contends there is no genuine issue and citing the parts of the record relied on to support the listed facts as alleged to be undisputed. A brief in response to such a motion shall include a specifically captioned section listing all material facts as to which it is contended that there exists a genuine issue necessary to be litigated *and citing the parts of the record relied on to support the facts alleged to be in dispute. . . .*

and consistent with Fed. R. Civ. P. 56(c)(1). Plaintiff includes similar sections in its respective summary judgment briefing as well.<sup>2</sup> Under the local rules, the Court may accept those facts identified by the movant as undisputed, to be admitted unless such a fact is controverted in the statement of genuine issues filed in opposition to the motion and supported by reference to record evidence. E.D. Va. Loc. Civ. R. 56(B).

The Court has concluded that the following narrative represents the undisputed facts<sup>3</sup> for the purpose of resolving the pending Motion for Summary Judgment:

### **A. Factual Background**

MicroStrategy Incorporated (“Defendant” or “MicroStrategy”) is a company in the business of selling analytics software and services. Compl. ¶ 29, ECF No. 1; Answer ¶ 29, ECF No. 34. One of MicroStrategy’s offerings is the MicroStrategy Platform. *Id.* The MicroStrategy Platform includes functionalities that, among other things, aggregate data values from data stored in a database. Compl. ¶ 36; Answer ¶ 36. The relevant iteration of the MicroStrategy Platform is MicroStrategy 7.5 (which is referred to by the parties interchangeably as both “MicroStrategy 7.5” and “MicroStrategy 7i”).<sup>4</sup> Def.’s Mem. Supp. Mot. Summ. J. (“Def.’s Mem. Supp.”) 13, ECF No. 120;<sup>5</sup> Pl.’s Mem. Opp’n Summ. J. (“Pl.’s Opp’n”) 10–11, ECF No. 152. According to

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E.D. Va. Loc. Civ. R. 56(B) (emphasis added). This practice is consistent with the 2011 amendments to the Federal Rules of Civil Procedure, which require the parties to support their factual assertions by “citing to particular parts of materials in the record.” Fed. R. Civ. P. 56(c); *see also Campbell v. Verizon Virginia, Inc.*, 812 F. Supp. 2d 748, 759 n.5 (E.D. Va. 2011) (discussing 2011 amendments to Rule 56), *aff’d* 474 F. App’x 167 (4th Cir. June 18, 2012).

<sup>2</sup> Although Plaintiff also filed its own Motion for Summary Judgment (ECF No. 121), the parties’ motions seek summary judgment on distinct issues. As a result, the Court will analyze them separately, rather than as cross-motions.

<sup>3</sup> Given that the Court has already ruled on Plaintiff’s Motion for Summary Judgment, certain facts have already been deemed not genuinely in dispute. *See Daedalus Blue, LLC v. MicroStrategy Inc.*, No. 2:20CV551 (RCY), 2023 WL 5941736 (E.D. Va. Sept. 12, 2023) (hereinafter, Mem. Op. Pl. Mot. Summ. J.) (docketed at ECF No. 328). Where proper, the Court therefore cites to its previous opinion for such facts.

<sup>4</sup> For the sake of clarity, the Court will only refer to this product as MicroStrategy 7.5.

<sup>5</sup> For this and all other filings, the Court utilizes the pagination assigned by the CM/ECF system and not the pagination appearing on the original document.

MicroStrategy, the MicroStrategy 7.5 Platform was first released on November 18, 2003. *See* Mem. Op. Pl. Mot. Summ. J. 5, ECF No. 328.

The United States Patent and Trade Office (“PTO”) issued United States Patent No. 8,341,172 (“the ’172 Patent”) on December 25, 2012. *See id.* at 2. The PTO issued United States Patent No. 9,032,076 (“the ’076 Patent”) on May 12, 2015. *See id.* The ’172 Patent and the ’076 Patent (together, the “Asserted Patents”) were originally developed by the International Business Machines Corporation (“IBM”). *Id.* Plaintiff is the current owner of the two patents, following IBM’s assignment of the patents in late January 2020. *Id.*

The ’172 Patent discloses a system for data aggregation. *Id.* at 3. Claim 1 of the ’172 Patent reads, in pertinent part:

1. A system for generating aggregate data values from data stored in a data source, comprising:
  - A processor;
  - A database service available in a network environment, the database service comprising
    - (a) a data source,
    - (b) an abstract data layer, wherein the abstract data layer comprises a plurality of logical fields used to compose an abstract query to query the data source, and for each logical field, providing an access method specifying at least a method for accessing the data, wherein at least one logical field specifies an aggregate access method, wherein the aggregate access method specifies a set of input data and an expression for determining an aggregate data value from the set of input data; and
    - (c) a runtime component configured to process an abstract query that includes the at least one logical field by
      - (i) retrieving a definition for the aggregate access method,
      - (ii) determining aggregate data values according to the definition,
      - (iii) merging the aggregate data values with query results obtained for logical fields, other than the at least one logical field, including in the abstract query, and
      - (iv) returning the results to the requesting entity.

*Id.* Claims 2 and 4–6 of the ’172 Patent are dependent on Claim 1. *Id.* Claim 7 of the ’172 Patent reads:

A computer-readable storage medium, that when executed by a processor performs operations comprising:

providing, for a requesting entity, an abstract data layer comprising a plurality of logical fields for composing an abstract query, and for each logical field:

defining an access method that specifies at least a method for accessing the data corresponding to the logical field, wherein at least one logical field specifies an aggregate access method for accessing the data corresponding to the at least one logical field, wherein the aggregate access method specifies a set of input data and an expression for determining an aggregate data value from the set of input data;

receiving, from the requesting entity, an abstract query that includes the at least one logical field specifying an aggregate access method;

retrieving a set of input data defined by the aggregate access method;

determining at least an aggregate data value from the set of input data;

transforming each logical field, other than the at least one logical field, included in the abstract query into a query contribution that is consistent with the data source specified by the access method for each logical field;

accessing the data source corresponding to each of the above logical fields using the query contribution and retrieving a set of query results data; and

returning, to the requesting entity, the at least one aggregate data value and the set of query results data.

*Id.* at 3–4.

The '076 Patent discloses role-based access control systems and methods, as well as a computer access-control program. *Id.* at 4. Claim 1 of the '076 Patent reads:

1. A role-based access control system, comprising:
  - a role definition system for defining roles to be sets of permissions on individual resources thus forming role instances, respectively;
  - a super role definition system for defining at least one super role by assigning at least one set of role instances to at least one group and assigning the at least one group to the at least one super role, wherein each super role is modified by adding or removing the role instances from the at least one group, and wherein each super role is nested according to a plurality of properties including a name, a parent role, the set of role instances, and an externalisation [sic] state;
  - and a super role assignment system for assigning a user or a user group to the at least one super role.

*Id.* Claims 2–3 and 5 of the '076 Patent are dependent on Claim 1. *Id.* Claim 6 of the '076 Patent reads:

6. A role-based access control method, comprising:
  - defining roles to be sets of permissions on individual resources, thus forming role instances, respectively;
  - assigning at least one set of role instances to at least one group and assigning the at least one group to at least one super role; and
  - nesting each super role according to a plurality of properties including a name, a parent role, the set of role instances, and an externalisation [sic] state, wherein each super role is modified by adding or removing the role instances from the at least one group.

*Id.* Claims 7–9 and 11 of the '076 Patent are dependent on Claim 6. *Id.* at 5.

Finally, Claim 12 of the '076 Patent reads:

12. A computer program product stored on a non-transitory computer-readable storage medium which when executed by a computer, causes the computer to control access, the controlling comprising:
  - defining roles to be sets of permissions on individual resources, thus forming role instances, respectively;
  - assigning at least one set of role instances to at least one group and assigning the at least one group to at least one super role; and
  - nesting each super role according to a plurality of properties including a name, a parent role, the set of role instances, and an externalisation [sic] state, wherein each super role is modified by adding or removing the role instances from the at least one group.

*Id.* Claims 13–15 of the '076 Patent are dependent on Claim 12. *Id.*

## **B. Relevant Procedural History**

Plaintiff filed a Complaint on November 4, 2020, alleging that MicroStrategy 7.5, among other MicroStrategy products, infringes on the '172 and '076 Patents. ECF No. 1. After initially filing a Motion to Dismiss for Failure to State a Claim, ECF No. 19, on December 30, 2020, Defendant filed an Answer on February 1, 2021. ECF No. 34. Claim construction was finalized via Memorandum Opinion and Order on March 9, 2022. ECF Nos. 84 and 85. After myriad discovery motions, extensions, and thorough briefing, this case is now at the summary judgment stage.

On November 15, 2022, this Court re-appointed Joshua J. Yi, PhD, as Special Master to assist the Court in deciding several pending motions from the parties, including Defendant's Motion for Summary Judgment. ECF No. 250. The Special Master issued a Report and Recommendation ("R&R") regarding Defendant's Motion for Summary Judgment on July 31, 2023. ECF No. 315. In that R&R, the Special Master recommended the Court deny Defendant's Motion for Summary Judgment. R&R 1. Defendant filed an objection to the Special Master's Report on August 14, 2023. ECF No. 316. Plaintiff filed its Response to Defendant's Objection on August 31, 2023. ECF No. 325. Defendant filed its Reply in support of its Objection on September 6, 2023. ECF No. 327.

## II. STANDARD OF REVIEW

### A. Review of Special Master's Report and Recommendation

When reviewing a party's timely objection to a special master's report and recommendation, the Court must decide *de novo* any objections to the Special Master's fact finding. Fed. R. Civ. P. 53(f). Similarly, the Court must decide *de novo* any objections to conclusions of law recommended by the Special Master. *Id.* "In acting on a master's order . . . the Court may adopt or affirm, modify, wholly or partly reverse, or resubmit to the master with instructions." *Id.* Any non-objected-to portions of a Special Master's report and recommendation are reviewed for clear error. *See, e.g., Strauch v. Computer Scis. Corp.*, No. 3:14-CV-956 (JBA), 2019 WL 7602150, at \*2 (D. Conn. Aug. 6, 2019) (reviewing unobjected-to portions of Special Master's report and recommendation for clear error); *Seggos v. Datre*, No. 17-CV-2684 (SJF)(ARL), 2019 WL 3557688, at \*2 (E.D.N.Y. Aug. 5, 2019) (same); *Andrews v. U.S. Pipe & Foundry Co.*, No. 2:06-cv-1645-RDP, 2009 WL 10703074, at \*2 (N.D. Ala. Aug. 5, 2009)

(applying the clearly erroneous standard to a Special Masters unobjected-to report and recommendation).

### **B. Rule 56: Summary Judgment**

Federal Rule of Civil Procedure Rule 56(a) provides that summary judgment should be granted “if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). The Court must determine “whether the evidence presents a sufficient disagreement to require submission to a jury or whether it is so one-sided that one party must prevail as a matter of law.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 243 (1986). The evidence must be viewed “in the light most favorable to . . . the nonmovant, and draw all reasonable inferences in [the nonmovant’s] favor.” *Dennis v. Columbia Colleton Med. Ctr., Inc.*, 290 F.3d 639, 645 (4th Cir. 2002). Moreover, the determination of “whether a given factual dispute requires submission to a jury must be guided by the substantive evidentiary standards that apply to the case.” *Anderson*, 477 U.S. at 255. Thus, where a “clear and convincing” evidence requirement would apply at trial—for instance, when assessing certain affirmative defenses—it also applies when reviewing the evidentiary record at the summary judgment stage. *Id.* at 255–56. That is, the appropriate summary judgment question in such circumstances becomes whether the evidence in the record could support a jury finding that the assertion or defense in question has been shown by clear and convincing evidence. *Id.*

When, as here, both parties have moved for summary judgment, the Court must review “each motion separately on its own merits to determine whether either of the parties deserves judgment as a matter of law.” *Republic W. Ins. Co. v. Williams*, 212 Fed. App’x. 235, 237 (4th Cir. 2007). “The fact that both sides moved for summary judgment does not establish that there is

no issue of fact and require that judgment be granted for one side or the other.” *Am. Fid. & Cas. Co. v. London & Edinburgh Ins. Co.*, 354 F.2d 214, 216 (4th Cir. 1965).

### III. DISCUSSION

The overarching issues to be decided by this Court are: (1) whether Defendant is entitled to summary judgment based on invalidity of the Plaintiff’s patents; (2) whether Defendant is entitled to summary judgment based on noninfringement of the asserted claims of the ’076 Patent; and (3) whether Defendant is entitled to summary judgment as to the ’172 and ’076 Patents’ ineligibility for patent protection. Def.’s Mem. Supp. 6–7, 45. After an extensive review of the relevant facts and law, the Special Master answered all of these questions in the negative and recommended denying Defendant’s Motion for Summary Judgment. R&R 1. Defendant timely objected to the Special Master’s recommendations. Def.’s Obj. 1–2, 26. After conducting its *de novo* review of the R&R and Defendant’s Objection, the Court agrees with the Special Master’s conclusions and will therefore overrule Defendant’s Objection and deny the Motion for Summary Judgment in full.

#### **A. Whether Defendant Is Entitled to Summary Judgment Based on Invalidity of the Plaintiff’s Patents**

Defendant argues in its Motion for Summary Judgment that the ’172 Patent is invalid based on either anticipation or obviousness. Def.’s Mem. Supp. 17. The Court considers each of these challenges in the context of each Patent in turn.

##### **1. Alleged Invalidity of the ’172 Patent**

###### *a. Special Master’s Conclusion*

After a careful review of Defendant’s assorted invalidity allegations, the Special Master concluded that a genuine issue of material fact exists as to the invalidity of the ’172 Patent; in turn,



the Special Master recommended denying Defendant's Motion for Summary Judgment. *See* R&R 11–14, 17–22, 24–25.

The Special Master first considered Defendant's contention that the MicroStrategy 7.5 product or documentation anticipates the asserted claims of the '172 Patent. *See* R&R 7–22. The Special Master analyzed each discrete claim of the '172 patent in conjunction with Defendant's purported anticipation evidence and concluded that the MicroStrategy 7.5 product and documentation do not anticipate the '172 Patent. *Id.* In coming to this conclusion, the Special Master made several relevant findings. First, the Special Master took issue with the fact that Defendant "'mix[ed]-and-match[ed]' citations to multiple references, which is legally improper to do for anticipation." R&R 12 (citing *Schering Corp. v. Geneva Pharms.*, 339 F.3d 1373, 1377 (Fed. Cir. 2003)). The Special Master therefore refused to consider the MicroStrategy System Administration Guide, Administrator Guide, and Advanced Operating Guide in conjunction with the software itself when determining whether the MicroStrategy product discloses the claims at issue. *See* R&R 12, 17–20. Likewise, the Special Master did not consider expert testimony that relied on these other references. *See, e.g., id.* at 12–13. The Special Master similarly did not consider any of Defendant's expert testimony that relied upon the confidential source code for corroboration because the source code was not "publicly available." *See id.* at 13. The Special Master also looked at the language of the '172 Patent's claims, and concluded that a genuine dispute exists as to whether the MicroStrategy 7.5 product performs the same steps in the same order because, "it is unclear whether or not Defendant's expert assumed the steps needed to be performed in the order recited." *Id.*

Finally, the Special Master repeatedly pointed out that Defendant's expert and Plaintiff's expert provided contradictory opinions regarding what the operation of the MicroStrategy product

discloses. *See, e.g., id.; see also id.* at 19–20. These contradicting opinions “reinforc[ed] the [Special Master’s] conclusion” that a genuine issue of material fact exists as to anticipation. *Id.*; *see id.* at 19–20.

In analyzing the Defendant’s potential obviousness defense, the Special Master once again found that “there is sufficient evidence that a genuine issue of material fact [exists] as to whether the MicroStrategy product and documentation render obvious the asserted claims of the ’172 Patent.” *Id.* at 24. This conclusion was based upon three main findings: (1) Defendant’s expert did not have any obviousness opinion based on the MicroStrategy 7.5 product for certain claims; (2) Defendant’s expert did not undertake the requisite analysis for obviousness; and (3) even if Defendant’s expert undertook the requisite analysis, additional considerations exist that would create a genuine issue of material fact regardless. *Id.* at 24–25.

*b. Defendant’s Objections*

Defendant raises various objections to the Special Master’s findings, several of which mirror its Objections to the Special Master’s Report and Recommendation concerning Plaintiff’s Motion for Summary Judgment. First, Defendant argues that the Special Master improperly failed to consider documentary evidence in conjunction with the MicroStrategy product itself when making a determination on Defendant’s anticipation defense. *See* Def.’s Obj. 8–12. Defendant contends that such evidence is frequently considered in conjunction with the underlying product in similar cases. *See id.* at 9–12 (citing, *inter alia*, 3 ANNOTATED PAT. DIG. § 17:141.50 (collecting cases)). Defendant next argues that the Special Master erred in disregarding MicroStrategy’s confidential product source code as anticipation evidence. *Id.* at 14–15. Defendant once again attempts to bolster its position by pointing to several cases in which such evidence was apparently considered. *Id.* at 14–15 (citing *Uniloc 2017 LLC v. Google LLC*, Case No. 2:18-cv-00504- RSP

(E.D. Tex. Dec. 4, 2019); *TransWeb, LLC v. 3M Innovation Props. Co.*, 812.F.3d 1295, 1301 (Fed. Cir. 2016); *Koninklijke Philips N.V. v. Zoll Medical Corp.*, No. 2014-1764, 656 Fed. App'x. 504, 528–29 (Fed. Cir. 2016)).

Lastly, Defendant contends that the Special Master, *sua sponte*, improperly “conducted a . . . claim construction (one neither party requested) to conclude that the steps performed in the [relevant] claim limitations must be performed in order.” *Id.* at 15. Per Defendant, doing so both lacked basis in the record and represents clear error that taints the Special Master’s overall conclusion. *Id.* at 16.

*c. Plaintiff’s Response*

In response to Defendant’s objections, Plaintiff first argues that Defendant did not explicitly object to the Special Master’s determination regarding denial of summary judgment of obviousness on the ’172 Patent. Pl.’s Resp. 5. Plaintiff argues that the Court should therefore adopt this unobjected-to conclusion. *Id.*

Plaintiff also contends that the Special Master correctly recommended denying summary judgment as to anticipation of the ’172 Patent claims and argues that the Court should adopt this conclusion. *Id.* Per Plaintiff, the Special Master correctly concluded that Defendant cannot argue anticipation of the ’172 Patent claims based on the combination of the MicroStrategy 7.5 product and related product manuals. *Id.* at 5–6. Plaintiff asserts that reliance on such “combination” constitutes an obviousness argument, rather than anticipation. *Id.* Plaintiff further argues that even if the Court were to find that Defendant can rely on multiple MicroStrategy 7.5 references for an anticipation defense, genuine issues of material fact remain, rendering summary judgment improper on this issue. *Id.* at 6. Specifically, Plaintiff notes that both parties’ experts have

provided contrasting opinions about precisely what the MicroStrategy 7.5 product and documentation disclose. *Id.*

Plaintiff makes several other arguments in favor of its position (i.e., adopting the Special Master’s recommendation denying summary judgment for Defendant). *See id.* at 7–9. Plaintiff first reasserts that Defendant’s confidential source code cannot be relied upon as § 102 prior art for anticipation purposes. *Id.* at 7. Plaintiff argues that Defendant even previously conceded that the source code was “irrelevant to its anticipation arguments, and it cannot take a contrary position now.” *Id.* Plaintiff next argues that the Special Master did not err in his order of steps analysis, and even if he did, the Special Master identifies another independent, substantive reason as to why summary judgment would be improper. *Id.* at 8. As to the former point, Plaintiff notes that it did in fact make an argument in its opening brief stating that the recited steps of the runtime component must be performed in the order set forth in the claims. *Id.* Plaintiff goes on to note that Defendant did not present any evidence on this issue in its Reply, and is therefore precluded from doing so now. *Id.* at 8–9. Alternatively, Plaintiff notes that the Special Master also found that there was a “material factual dispute as to whether any of the alleged MicroStrategy [7.5] prior art discloses the step of ‘retrieving a definition for the aggregate access methods.’” *Id.* Plaintiff thus argues that summary judgment of invalidity of the ’172 Patent is improper based upon either of these independent substantive findings by the Special Master. *See id.* at 8–9.

*d. The Court’s Analysis*

The Court agrees with the Special Master’s conclusion that a genuine issue of material fact exists as to the invalidity of the ’172 Patent. The crux of this portion of the parties’ dispute concerns whether the MicroStrategy 7.5 product and functionalities anticipate the ’172 Patent. The parties likewise dispute what sort of evidence may be considered in the anticipation inquiry.

Under Pre-America Invents Act (“pre-AIA”) 35 U.S.C. § 102(a),<sup>6</sup> a patent claim is invalid for anticipation if “the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent.” 35 U.S.C. §102(a) (2011). The phrase “known or used” refers to “knowledge or use which is accessible to the public.” *BASF Corp. v. SNF Holding Co.*, 955 F.3d 958, 964 (Fed. Cir. 2020). Pre-AIA 35 U.S.C. § 102(g)(2) provides similar restrictions, rendering patent claims invalid for anticipation where, “before [the patentee’s] invention thereof, the invention was made in this country by another inventor who had not abandoned, suppressed, or concealed it.” § 102(g)(2) (2011). To prove that a claim is invalid for anticipation, “the accused infringer must show by clear and convincing evidence that a single prior art reference discloses each and every element of a claimed invention.” *K-TEC, Inc. v. Vita-Mix Corp.*, 696 F.3d 1364, 1377 (Fed. Cir. 2012) (quoting *Silicon Graphics, Inc. v. ATI Techs., Inc.*, 607 F.3d 784, 796 (Fed. Cir. 2010)). Invalidity by anticipation is typically a question of fact that may only become “ripe for judgment as a matter of law” where there are no genuine factual disputes underlying the inquiry. *See SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1343 (Fed. Cir. 2005).

An additional consideration concerns what sorts of evidence may be used to prove anticipation. For product-based anticipation such as that at issue, secondary materials about a product *may* be relied upon as evidence of how the prior art product works. *See, e.g., RCA Corp. v. Data Gen. Corp.*, 887 F.2d 1056, 1060 (Fed. Cir. 1989) (“[T]hat the [allegedly anticipatory product anticipates] the claimed invention may be established by any relevant evidence, such as memoranda, drawings, correspondence, and testimony of witness.”); 3 ANNOTATED PAT. DIG. §

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<sup>6</sup> The ’172 Patent has a filing date prior to the March 16, 2013, effective date of the America Invents Act (“AIA”). As a result, the applicable law is pre-AIA 35 U.S.C. § 102. *See* America Invents Act § 3, Pub. L. No. 112-29, 125 Stat. 284 (2011); *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1341 n.4 (Fed. Cir. 2016). The same is true for the ’076 Patent.

17:141.50 (“When anticipation is based on the public use of prior art device, i.e., the physical thing, a challenger may rely on multiple pieces of evidence, including multiple documents, to show that prior art device meets each claim limitation . . . [because] the multiple documents are being used to show that the single prior art device, when used publicly, contained all of the claim limitations.”). Indeed, such secondary materials may even be deemed part of the product itself when they are delivered alongside it. *See, e.g., Finjan, Inc. v. Symantec Corp.*, No. 10-CV-593 (GMS), 2013 WL 5302560, at \*12–13 (D. Del. Sept. 19, 2013). (“[T]he . . . software product upon which [the expert witness] relied included both the executable software and a copy of the user guide explaining how the product worked.”).

Expert opinion evidence is also typically involved when the issue of anticipation is raised. While experts often rely on the outward-facing aspects of the products at issue, expert reliance on confidential information—such as confidential source code—may be permissible where the expert is merely relying upon such information as corroborating evidence for how a system or product operates. *See, e.g., Koninklijke Phillips N.V. v. Zoll Med. Corp.*, 656 Fed. App’x 504, 528–29 (Fed. Cir. 2016) (noting that an expert may rely on otherwise confidential information as corroborating evidence for their opinion).

Here, Defendant argues that MicroStrategy 7.5 *and* its associated documentation anticipate the ’172 Patent.<sup>7</sup> Embedded within that argument is the assertion that the product and its associated documentation may be considered together for the purposes of the anticipation inquiry. Plaintiff disagrees, arguing that the product and documentation may not be considered in combination. Plaintiff alternatively argues that even if Defendant can rely on multiple references

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<sup>7</sup> This is distinct from the issue conceded/unobjected-to in the context of Plaintiff’s Motion for Summary Judgment, i.e., whether MicroStrategy 7.5 documentation alone anticipates the ’172 Patent. The Court has granted summary judgment to Plaintiff on that issue, foreclosing further argument or reliance on that defense by Defendant. *See* Mem. Op. Pl. Mot. Summ. J. 8–12.

in combination for an anticipation defense (contrary to the Special Master's finding), disputed issues of material fact remain thus precluding summary judgment.

A survey of the relevant caselaw reveals that Defendant is correct in its assertion that multiple references—such as the product and its associated documentation—may be considered together for anticipation purposes. *See, e.g., RCA Corp.*, 887 F.2d at 1060; 3 ANNOTATED PATENT DIGEST § 17:141.50. The inquiry does not end there, however, because the Special Master's finding did not rest *solely* on a finding that multiple references could not be considered together. *See, e.g., R&R 13*. The Special Master also found that the parties' experts provided contrasting opinions on the issue of anticipation and what each product teaches, indicating the existence of a genuine factual dispute. *See id.* Plaintiff emphasizes this point in its Response, noting various claim limitations where there are disputes between the experts as to what the relevant limitations disclose. *See Pl.'s Resp. 6*. Were these expert opinions based on mere conjecture or speculation, they would be insufficient to create a genuine issue of material fact. *See, e.g., Small v. WellDyne, Inc.*, 927 F.3d 169, 175–76 (4th Cir. 2019) (noting that expert testimony may be sufficient to generate a genuine dispute of material fact where it is admissible and non-speculative). However, the expert opinions here are indeed well-supported—both by reference to the products themselves, and by permissible reference to documentation associated with the products. Therefore, the conflicting opinions here are sufficient to generate a triable issue on anticipation, rendering summary judgment inappropriate. *See, e.g., Arthur A. Collins, Inc. v. N. Telecom Ltd.*, 216 F.3d 1042, 1047–48 (Fed. Cir. 2000) (noting that a triable issue may be generated where an expert sets forth the factual foundation for their opinion in sufficient detail).

Turning to Defendant's potential obviousness defense, Defendant has not specifically objected to the Special Master's finding that a genuine factual dispute exists regarding whether the

combination of the MicroStrategy product and documentation render obvious the asserted claims of the '172 Patent. *See* R&R 25; Pl.'s Resp. 5; *see generally* Def.'s Obj. A review of the record reveals no clear error in this unobjected-to portion of the R&R.

Accordingly, the Court will overrule the Defendant's objection on the issue of anticipation and adopt the Special Master's overall recommendation to deny summary judgement as to invalidity of the '172 Patent.

## 2. Alleged Invalidity of the '076 Patent

### *a. Special Master's Conclusion*

As with the '172 Patent, the Special Master concluded that a genuine issue of material fact exists as to the invalidity of the '076 Patent. *See* R&R 41–44. The Special Master identified several factors that apparently compelled such a conclusion.

Regarding anticipation, the Special Master first noted that even if the MicroStrategy 7.5 product was publicly available prior to the priority date of the '076 Patent, the screenshots provided by the Defendant *alone* do not make it clear that the MicroStrategy Platform operates in the same way contemplated by the '076 Patent. *See id.* at 41. The Special Master later noted that Defendant “improperly conflates the anticipation and obviousness analyses.” *Id.* at 42. This statement, coupled with the Special Master's earlier focus on just the screenshots of the MicroStrategy product in action, indicates that the Special Master once again did not consider the MicroStrategy product in conjunction with its associated documentation for the purposes of analyzing Defendant's anticipation defense.

The Special Master also noted several other perceived flaws in the Defendant's summary judgment motion and accompanying evidence. First, the Special Master stated that Defendant's expert's invalidity opinions are largely conclusory, particularly when viewed in the light most



favorable to the Plaintiff. *See id.* at 42. Next, the Special Master noted that Defendant did not provide sufficient evidence regarding the “secondary considerations of non-obviousness,” rendering summary judgment inapt. *Id.* at 43. Finally, the Special Master once again deemed irrelevant any evidence related to Defendant’s confidential source code. *Id.* For all these reasons, the Special Master concluded that a genuine issue of material fact exists as to whether the asserted claims of the ’076 Patent are invalid, and therefore that summary judgment on the matter is improper. (*Id.* at 43–44.)

*b. Defendant’s Objections*

Defendant’s objections to the Special Master’s recommendation regarding invalidity of the ’076 Patent largely mirror its analogous objections concerning invalidity of the ’172 Patent. *See* Def.’s Obj. 8–14; *supra* Part III.A.1.b. Specifically, Defendant argues, “the Special Master again only considers screenshots of the product as evidence of how it works, but not any of the product documentation Dr. Jones relies on. . . . The Court should correct this legal error and consider all of the evidence MicroStrategy cites for invalidity.” Def.’s Obj. 8. Defendant goes on to state that if all the evidence is properly considered, the Court would be in a position to either grant non-infringement, invalidity, or “at least find that there are fact issues on both side that should be tried to a jury.” Def.’s Obj. 8–9.

*c. Plaintiff’s Response*

Plaintiff argues in its response that the Special Master correctly recommended denial of summary judgment on the issues of anticipation and obviousness as to the ’076 Patent. *See* Pl.’s Resp. 6–7. Plaintiff first impliedly incorporates its argument that the Special Master properly declined to consider the combination of the MicroStrategy 7.5 product with its corresponding manuals. *See id.* Plaintiff further argues that the Special Master’s findings regarding invalidity of

the '076 Patent were not based solely on his opinion that the MicroStrategy product and its associated documentation could not be considered in combination for anticipation. *Id.* at 6. Instead, Plaintiff contends that the Special Master identified “six separate and independent reasons for denying summary judgment of invalidity of the '076 Patent, only one of which was his opinion that multiple references could not be considered together for anticipation.” *Id.* at 6–7 (emphasis in original). Therefore, even if the product and manuals can be considered together for anticipation purposes, Plaintiff argues that summary judgment remains improper. *Id.* at 7. Finally, Plaintiff reiterates its argument that the Special Mater correctly declined to consider confidential source code as anticipation evidence. *Id.*

*d. The Court's Analysis*

The Court agrees with the Special Master's ultimate conclusion that a genuine issue of material fact exists as to the invalidity of the '076 Patent. The primary issue with regard to the '076 Patent—at least for this portion of the dispute—concerns whether the MicroStrategy 7.5 product and functionalities anticipate the claims of the '076 Patent. The parties also clash over what sort of evidence may be considered in the anticipation inquiry.

Here, Defendant argues that MicroStrategy 7.5 and its associated documentation anticipate the '076 Patent. Defendant makes analogous arguments to those made with regard to the '172 Patent—namely, that the product and related expert testimony should be considered in conjunction with the associated documentation and manuals. Defendant continues by claiming that when the evidence is so considered, the Court would be able to grant non-infringement, invalidity, or “at least find there are fact issues on both side that should be tried to a jury.” *See* Def.'s Obj. 8–9. Plaintiff counters by arguing that the Special Master properly declined to consider “combination”

evidence, and that, in any event, summary judgment is improper for the independent reasons outlined by the Special Master. *See* Pl.’s Resp. 6–7.

For the same reasons outlined regarding the ’172 Patent, Defendant is correct that multiple references may be considered together for anticipation purposes. *See supra* Part III.A.1.d; *RCA Corp.*, 887 F.2d at 1060. Defendant is likewise correct that the Special Master’s contrary and incorrect finding permeated most of the other proffered reasons for denying summary judgment. *See, e.g.*, R&R 41–42 (considering only screenshots of the product’s operation as evidence and not the relevant, explanatory product manuals; finding Defendant improperly conflated obviousness and anticipation); Def.’s Obj. 12–13.

Nevertheless, the Special Master’s ultimate conclusion—finding the existence of a genuine issue of material fact—remains correct. Just as with the ’172 Patent, the parties’ experts provide conflicting opinions regarding what exactly the operation of the product discloses, and whether it teaches the limitations in the asserted ’076 Patent claims. *Compare, e.g.*, Pl.’s Resp. 7 (noting that Plaintiff’s expert, Dr. Malek, claims Defendant cannot show that the MicroStrategy product teaches the limitations in all of the asserted ’076 claims) *with* Opening. Exp. Report of Dr. Jones (“Dr. Jones Rept. Pt. 1”) at 35, ECF No. 113-1 and Opening Exp. Report of Dr. Jones, Cont’d (“Dr. Jones Rept. Pt. 2”) at 24–27 (relying on the MicroStrategy 7.5 product and documentation to conclude that “to the extent the accused functionalities . . . meet the limitations of the ’076 patent, that functionality pre-dated the ’076 patent.”), ECF No. 113-2. Moreover, these opinions derive from an analysis of relevant, admissible information (e.g., the product and related documentation). *See, e.g.*, Dr. Jones Rept. Pt. 2 at 30–31 (relying on the MicroStrategy 7.5 System Administration Guide as anticipation evidence).

Because these conflicting expert opinions are well-supported both by permissible reference to the actual operation of the relevant product as well as its associated documentation, there is a genuine issue of material fact on anticipation. *See, e.g., Arthur A. Collins, Inc. v. Northern Telecom Ltd.*, 216 F.3d 1042, 1047–48 (noting that a triable issue may be generated where an expert sets forth the factual foundation for their opinion in sufficient detail). Summary judgment on this issue is therefore inappropriate. *See SmithKline Beecham Corp.*, 403 F.3d at 1343 (Fed. Cir. 2005).

With respect to Defendant’s potential obviousness defense, Defendant has again not specifically objected to the Special Master’s finding that a genuine factual dispute exists regarding whether the combination of the MicroStrategy product and documentation render obvious the asserted claims of the ’076 Patent. A review of the record reveals no clear error in this unobjected-to portion of the R&R.

Accordingly, the Court will overrule the Defendant’s objection on the issue of anticipation and adopt the Special Master’s overall recommendation denying summary judgment on the issue of invalidity as to the ’076 Patent.

**B. Whether the Defendant Is Entitled to Summary Judgment Based on Noninfringement of the Asserted Claims of the ’076 Patent**

**1. Special Master’s Conclusion**

The Special Master concluded that a genuine issue of material fact exists as to “whether the accused MicroStrategy Platform and Workstation product infringes the asserted claims of the ’076 Patent.” R&R 32. As a result, the Special Master recommended denying Defendant’s Motion for Summary Judgment as to noninfringement.

The Special Master began his analysis by outlining Defendant’s noninfringement contentions:

Defendant alleges that the accused MicroStrategy Platform and Workstation product do not infringe the asserted claims of the ’076 Patent as . . . “there is no property in the system that reflects whether assignments for a specific super role ***shall be*** managed by an ***external*** authorization provider” and “there is no ***nesting*** of a super role ***according to*** the property.”

*Id.* (quoting Def.’s Mem. Supp. 26) (emphasis in original). The Special Master continued by breaking Defendant’s argument into several discrete pieces. First, the Special Master addressed Defendant’s arguments concerning the “shall be managed” language. *Id.* Noting that the Workstation application has “unrestricted right to manage the super role object in at least some scenarios,” the Special Master concluded there is at least a genuine issue of material fact as to whether the Workstation application meets this limitation. *Id.* The Special Master continued by finding that “shall be managed by” does not necessarily equate to “shall *only* be managed by,” as argued by the Defendant. *Id.* at 33–34 (emphasis in original). While narrower than “can be managed by,” “shall be managed by” requires that the “external authorization provider must have both the capability to manage and also must do the management itself.” *Id.* at 34. To that end, the Special Master concluded that a genuine issue of material fact exists as to this element of Defendant’s noninfringement argument.

The Special Master then turned to the “by an external authorization provider” language. *See id.* Dealing with the issue relatively quickly, the Special Master noted that “because the Workstation application communicates with the MicroStrategy Platform over HTTP . . . it is separate from—and thus arguably external to—the MicroStrategy platform.” *Id.* The Special Master subsequently noted that “whether the Workstation application is actually ‘outside of an

organization’s computer-based resources,’ . . . is a fact question to be determined by the jury,” rendering summary judgment improper. *Id.* at 34–35.

Moving on to another portion of the disputed language—“nesting of a super role according to the property”—the Special Master once again found a genuine issue of material fact. *Id.* at 35. The Special Master first stated that Plaintiff provided sufficient evidence via expert testimony to generate a genuine issue of material fact as to whether the accused MicroStrategy product meets this limitation. *Id.* The Special Master further found that Defendant improperly imputed additional requirements (e.g., a storage requirement) into the claim language in order to argue noninfringement. *Id.* The Special Master also noted that the claim language is silent both on storage and whether “‘nesting according to property’ could impact the user group’s object placement within the hierarchy.” *Id.* at 35–36.

For all of these reasons, the Special Master found that a genuine issue of material fact exists as to noninfringement, rendering summary judgment for the Defendant inappropriate. *See id.* at 32–36.

## 2. Defendant’s Objections

Defendant’s primary objection to the Special Master’s conclusion is that “with respect to the parties’ citations to the *same evidence*, [the Special Master] found that there are *material issues of fact* as to whether that evidence meets the claims for infringement, but there are *no issues of fact* as to that evidence not meeting the claims for invalidity.”<sup>8</sup> Def.’s Obj. 22 (emphasis in original). Defendant contends that “[t]hese decisions are irreconcilable and clear error of law,” because claim terms must be construed the same way for both invalidity and infringement. *Id.* (citing

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<sup>8</sup> This argument references the Special Master’s Report and Recommendation concerning Plaintiff’s Motion for Summary Judgment (“R&R regarding Pl.’s MSJ,” ECF No. 306). There, the Special Master recommended granting summary judgment for Plaintiff as to Defendant’s potential anticipation (i.e., invalidity) defense, based upon the same evidence considered here. *See* R&R regarding Pl.’s MSJ 19–21, 24–26, 36–37.

*Communique Lab'y, Inc. v. Citrix Sys., Inc.*, 889 F.3d 735, 743 (Fed. Cir. 2018)). Defendant further fleshes out its objection by noting that “the fact that Daedalus contends the inheritance evidence . . . meets the claim limitations allows this Court to find as a matter of law that the limitation is met by the same functionality in the prior art product.” *Id.* (citing *Vanmoor v. Wal-Mart Stores, Inc.*, 201 F.3d 1363, 1366 (Fed. Cir. 2000); *Evans Cooling Sys., Inc. v. Gen. Motors Corp.*, 125 F.3d 1448, 1451 (Fed. Cir. 1997); *Communique Lab'y, Inc.*, 889 F.3d at 743). Defendant argues that the Court should, “[a]t a minimum . . . resolve the legally improper decision to treat the evidence differently for infringement and invalidity.” *Id.* at 23. Absent such a correction, Defendant argues that the case would proceed with “clearly reversible error.” *Id.* at 24.

Defendant then argues that the Special Master’s recommendation regarding noninfringement also involved an improper and inconsistent reconstruction of the relevant claim. *See id.* at 24–26. The Defendant also contends that, even accepting the Special Master’s reconstruction, “the Special Master stopped after finding that ‘the Workstation application has unrestricted right to manage the super role object *in at least some scenarios*,” rather than continuing on to determine whether Plaintiff actually presented evidence of such scenarios. *See id.* at 25–26 (emphasis in original). Defendant argues that Plaintiff was required to adduce—and the Special Master was required to analyze—such evidence to determine whether it was sufficient to defeat summary judgment. *See id.* Defendant argues that absent such evidence and analysis, it is entitled to summary judgment of noninfringement. *Id.* at 26.

### 3. Plaintiff’s Response

In response to Defendant’s objections, Plaintiff first argues that the Special Master did not engage in inconsistent treatment of the evidence for invalidity and infringement as to the ’076 Patent. *Id.* at 9. Plaintiff reasserts and incorporates its arguments set forth in its concurrently filed

Response to Defendant’s Objection to the Special Master’s R&R regarding Plaintiff’s Motion for Summary Judgment (“Pl.’s Resp. Supp. Pl.’s MSJ R&R,” ECF No. 324). *See* Pl.’s Resp. 9 (citing Pl.’s Resp. Supp. Pl.’s MSJ R&R 6–7). Generally, Plaintiff argues that the accused functionality in the Workstation product is not identical to functionality in the alleged prior art Desktop product. *See* Pl.’s Resp. 9. Plaintiff then points to a few specific differences between these products, particularly with regard to the “nesting” of super roles according to an “externalisation [sic] station.” *See* Pl.’s Resp. Supp. Pl.’s MSJ R&R 6–7. Plaintiff also argues that any testimony regarding the relevant products having identical functionality has been excluded, further generating material factual disputes. *Id.* at 7. Plaintiff therefore contends that any alleged inconsistent treatment is irrelevant, insofar as the products themselves are not actually the same in terms of their relevant functionality. *See* Pl. Resp. 9.

Plaintiff continues by arguing that the Special Master did not engage in an incomplete analysis of Defendant’s motion for non-infringement. *Id.* In support of this contention, Plaintiff submits that the Special Master correctly reasoned from the Court’s construction of “externalisation [sic] state,” and did not improperly engage in a re-construction of the claim. *Id.* Specifically, Plaintiff contends Defendant “incorrectly assumes that, in order for a user/application to ‘manage’ a super role, that user/application must be the only one with management authority. But there is nothing in the Court’s construction . . . that requires a super role to be [so managed.]” *Id.* at 10. Plaintiff also argues that it provided ample evidence of the Workstation product’s infringing capabilities: “Daedalus . . . showed . . . how Workstation operating in “FullControl” mode constitutes an ‘external authorization provider’ that manages super roles as required by the claim language . . . this was ample evidence to show [that Workstation] has both the capability to manage and actual does management itself.” *Id.* at 10–11. Plaintiff states that the fact that



Defendant sells Workstation to customers with this feature is sufficient evidence to show infringement under the Special Master's reasoning. *Id.* at 11.

#### 4. The Court's Analysis

The Court finds that a genuine dispute of material fact exists as to whether the accused MicroStrategy Platform and Workstation product infringes the asserted claims of the '076 Patent. Therefore, the Court adopts the Special Master's recommendation denying summary judgment for Defendant as to noninfringement.

Determining whether a patent has been infringed is a two-step process. *Warner-Lambert Co. v. Teva Pharms. USA, Inc.*, 418 F.3d 1326, 1340 (Fed. Cir. 2005) (citing *PC Connector Sols. LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1362 (Fed. Cir. 2005)). First, the court must construe the claims. *Id.* Second, the court must "compare the accused product or process to the properly construed claims." *Id.* Importantly, "[t]he first step is a question of law and the second step is a question of fact." *Id.* (citing *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1337 (Fed. Cir. 2005)). Infringement may only be found where "the accused product or process contains each limitation of the claim." *Id.* (citing *Deering Precision Instruments, L.L.C. v. Vector Distrib. Sys., Inc.*, 347 F.3d 1314, 1324 (Fed. Cir. 2003)). Moreover, the tests for infringement and anticipation are largely identical; the only material difference is timing. *See Commscope Techs. v. Dali Wireless Inc.*, 10 F.4th 1289, 1294 (Fed. Cir. 2021) ("As the Supreme Court has stated, '[t]hat which infringes, if later, would anticipate, if earlier.'") (quoting *Peters v. Active Mfg. Co.*, 129 U.S. 530, 537 (1889)). That is, if a product meets the test for infringement, it would be held to instead *anticipate* the purportedly patented product *if* it preceded said product.

The relevant claim language from the '076 Patent is as follows: "each super role is nested according to a plurality of properties including a name, a parent role, the set of role instances, and

an externalisation [sic] state.” Def.’s Mem. Supp. 26; *see* R&R 32. The Court previously construed “externalisation state” as “a property that reflects whether or not user and user group assignments for a specific super role shall be managed by an external authorization provider, wherein the authorization provider is outside of an organization’s computer-based resources.” Mem. Op. 1, 11, ECF No. 84 (citing R&R Regarding Claim Construction, ECF No. 78) (adopting Special Master’s construction of the relevant claim language). The parties dispute whether the accused MicroStrategy products meet this limitation (i.e., whether the product infringes the ’076 Patent).

Defendant argues that the accused MicroStrategy products cannot meet this limitation for two reasons: “(1) there is no property in the system that reflects whether assignments for a specific super role *shall be* managed by an *external* authorization provider, and (2) there is no *nesting* of a super role *according to* the property.” Def.’s Mem. Supp. 26 (emphasis in original). Defendant also argues that by finding fact issues exist as to noninfringement, but no fact issues exist as to anticipation, the Special Master has staked out irreconcilable positions.<sup>9</sup> Plaintiff counters by pointing to expert opinion evidence provided by Dr. Malek purportedly disputing Defendant’s factual claims. Specifically, Plaintiff notes that Dr. Malek “identifie[d] source code in the Workstation application for the MicroStrategy Platform that shows nesting of super roles according to an externalization state.” *See* Pl.’s Opp’n 30–32. Moreover, as Plaintiff predicted, Defendant’s allegedly unassailable position on this matter was weakened by this Court’s

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<sup>9</sup> Defendant’s concern is based on the fact that infringement and anticipation largely depend on the same evidence, and concern the same general question. *See Commscope Techs. v. Dali Wireless Inc.*, 10 F.4th 1289, 1294 (Fed. Cir. 2021). Defendant therefore essentially contends that either (1) factual disputes must preclude summary judgment on both issues, or (2) factual disputes preclude neither issue, and because Defendant’s product allegedly came first, it anticipates the ’076 Patent.

subsequent decision to strike certain relevant portions of Mr. Cezary Raczko’s testimony. *See id.* at 33–34.

As previously discussed, well-supported expert opinion evidence can generate a genuine dispute of material fact sufficient to defeat summary judgment. *See, e.g., Arthur A. Collins, Inc. v. N. Telecom Ltd.*, 216 F.3d 1042, 1047–48 (Fed. Cir. 2000) (suggesting that a triable issue may be generated where experts set forth adequate factual foundations for their contrary opinions); *Small v. WellDyne, Inc.*, 927 F.3d 169, 175–76 (4th Cir. 2019) (same); *M&M Med. Supplies and Servs., Inc. v. Pleasant Valley Hosp.*, 981 F.2d 160, 165–66 (4th Cir. 1992) (same).<sup>10</sup> Such is the case here.

Cognizant of the Federal Circuit’s concern that “summary judgment would disappear from patent litigation” if expert opinions on infringement or noninfringement were accepted without sufficient scrutiny of their factual basis, *Novartis Corp. v. Ben Venue Lab’ys, Inc.*, 271 F.3d 1043, 1051 (Fed. Cir. 2001), this Court nevertheless find that genuine, material factual disputes preclude summary judgment as to noninfringement of the ’076 Patent. Defendant provides ample evidence—bolstered by well-supported expert opinions—that its product does not infringe, or alternatively, that it anticipates the ’076 Patent. Plaintiff counters Defendant’s contentions with substantial well-supported expert evidence of its own purporting to prove infringement. Given such factual disputes, summary judgment is therefore improper.<sup>11</sup>

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<sup>10</sup> Fourth Circuit law is relevant insofar as the summary judgment standard and concerns surrounding expert evidence are “procedural matter not unique to patent law.” *See Arthur A. Collins, Inc.*, 216 F.3d at 1048 (citing *Glaverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc.*, 45 F.3d 1550, 1560 n.3 (Fed. Cir. 1995)).

<sup>11</sup> Likewise, the Court has found that factual disputes preclude summary judgment as to anticipation of the ’076 Patent. *See* Mem. Op. Pl. Mot. Summ. J. 15–20, ECF No. 328. This outcome resolves and affirms Defendant’s valid concern that the Special Master treated the evidence inconsistently with regard to infringement and anticipation.

### C. Whether the Asserted Claims Under the '172 and '076 Patents Lack Patent-Eligible Subject Matter

Under 35 U.S.C. § 101, patent-eligible subject matter is defined as follows: “Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent.” 35 U.S.C. § 101. Based on this language, courts have deemed certain subject matter ineligible for patent protection. *Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (citing *Ass’n Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). Specifically, laws of nature, natural phenomena, and abstract ideas are not patentable. *Id.*

The Supreme Court has developed a two-part test to distinguish between patents “that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts.” *Id.* at 217. First, courts must determine whether the claims in question are “directed to one of those patent ineligible concepts.” *Id.* (citing *Mayo Collaborative Servs. v. Prometheus Lab’ys*, 566 U.S. 66, 76-78 (2012)). If the answer to this first inquiry is yes, the court “then ask[s], ‘what else is there in the claims before us? . . . To answer that question, we consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (citing *Mayo Collaborative Servs.*, 566 U.S. at 78). This two-step analysis is intended to be “a search for an “inventive concept”—i.e., an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.’” *Id.* (citing *Mayo Collaborative Servs.*, 566 U.S. at 73).

#### 1. The '172 Patent

Defendant’s position on summary judgment is that (1) Claim 1 of the '172 Patent is ineligible for patent protection, and (2) Claim 1 is representative of the remainder of the '172

Patent's claims, rendering them ineligible for protection as well. The Special Master found that Defendant has not shown, on the basis of undisputed facts, that the '172 Patent is ineligible as a matter of law, and therefore summary judgment should be denied. For the reasons set forth below, the Court agrees.

*a. Special Master's Conclusion*

The Special Master conducted a patent eligibility inquiry pursuant to the two-step *Alice* test, and ultimately concluded that the '172 Patent does not lack patent-eligible subject matter. The Special Master therefore recommended denying Defendant's summary judgment motion as to this issue. *See* R&R 47–54.

The Special Master first considered Claim 1 of the '172 Patent in conjunction with the '172 Patent's specification. *See id.* at 47–48. Per the Special Master, “[t]he specification of the '172 Patent describes problems in the art and a solution to those problems.” *Id.* at 48. Moreover, the Special Master noted how the '172 Patent and its purported benefits “indicate that the claimed inventions improve the capabilities of conventional database systems.” *Id.* at 49. The Special Master also suggested that Defendant's characterization of the claims oversimplifies them and ignores the stated problems of the relevant art. *Id.* Based on this review, the Special Master determined that Claim 1 of the '172 Patent represents “an ‘improvement to [database] functionality itself,’ and not simply a[n abstract idea or concept] running on a computer.” *Id.* at 47–48 (citing *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1350, 1336 (Fed. Cir. 2016)). The Special Master therefore found that Claim 1 of the '172 Patent satisfies *Alice* step one because it is directed toward a patent-eligible concept. *See id.* at 49.

Thereafter, the Special Master considered whether Claim 1 of the '172 Patent contains an inventive concept—i.e., *Alice* step two. *Id.* at 51–52 (citing *Enfish, LLC*, 822 F.3d at 1335 (quoting

*Alice*, 573 U.S. at 218)). The Special Master first provided the caveat that *Alice* step two is only necessary where step one is not satisfied. *Id.* at 51 (citing *Enfish, LLC*, 822 F.3d at 1335 (quoting *Alice*, 573 U.S. at 218)). The Special Master then conducted the step two analysis regardless and concluded that a genuine issue of material fact exists regarding whether Claim 1 of the '172 Patent contains an inventive concept. *See id.* at 51–52. The Special Master made several findings on the way to this conclusion: (1) the inventive concept in Claim 1 is “improved data structures that improve the way database systems dynamically combine and filter data,” *id.*; (2) the specification of the '172 Patent “expressly describes problems with the prior art” and provides non-routine and unconventional solutions, *id.* at 52; and (3) regarding the prosecution history, the PTO’s previous rejection of different claims is insufficient to show there is no genuine dispute of material fact as to inventiveness. *Id.*

Lastly, the Special Master addressed the eligibility of the other claims of the '172 Patent. *Id.* at 53–54.<sup>12</sup> The Special Master first reiterated that he had already found Claim 1 of the '172 Patent to be patent eligible. *Id.* at 53. Because the parties agree that Claim 1 and Claim 7 are similar, the Special Master then concluded that Claim 7 was also patent eligible. *Id.* at 53–54. The Special Master then essentially provided two alternative conclusions: either (1) Claim 1 is representative of Claims 2, 4, 5, and 6, rendering them patent eligible, or (2) a genuine issue of material fact exists as to whether Claim 1 is representative of Claims 2, 4, 5, and 6, rendering summary judgment on the issue improper. *Id.* at 54.

Any of the above conclusions leads to the Special Master’s recommendation to deny summary judgment, because either Claim 1 satisfies step one of the *Alice* test (and by Claim 1’s

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<sup>12</sup> As noted above, the Special Master’s *Alice* part-one inquiry considered just Claim 1 of the '172 Patent. After finding it patent-eligible, the Special Master then conducted the *Alice* part-two inquiry, before turning to the eligibility of the remaining claims. *See R&R* 47–49, 51–54.

representative nature, so do Claims 2, 4, 5, 6, and 7), rendering the material definitively patent-eligible, *or* Claim 1 satisfies step one of the *Alice* test but there remains a genuine issue of material fact as to its representative nature, precluding summary judgment, *or* Claim 1 does not satisfy step one of the *Alice* test yet a genuine issue of material fact persists as to step 2, again precluding summary judgment as to Claim 1 or any of the other purportedly represented Claims. *Id.*

*b. Defendant's Objections*

Defendant objects to the Special Master's overall conclusion regarding eligibility of the '172 Patent, arguing that the Special Master's underlying reasoning constituted legal error. Def.'s Obj. 27–29. First, Defendant argues that the Special Master's focus on the patent specification, “untethered from the claim language . . . constitutes error because ‘[t]he [eligibility] inquiry *must* focus on the language of the Asserted Claims themselves.’” *Id.* at 27 (quoting *Synopsys, Inc. v. Mentor Graphics Corp.*, 839 F.3d 1138, 1149 (Fed. Cir. 2016) (emphasis in original)). Defendant also contends that the only feature that the Special Master identifies as “new” technology is the ordered process steps “which are not data structures but merely describe retrieval of data . . . [and] which have routinely been found invalid under § 101.” *Id.* at 28 (citing, *inter alia*, *West View Res., LLC v. Audi AG*, 685 F. App'x 923 (Fed. Cir. 2017); *Elec. Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016)). Defendant contends that similar legal error contaminates the Special Master's *Alice* step two analysis, insofar as to the Special Master's conclusion was supported by vague reference to improvements in data structures, rather than by reference to any language within the claims. *Id.*

*c. Plaintiff's Response*

Plaintiff responds that Defendant failed to identify any legal error in the Special Master's determination that the '172 Patent claims are directed to patentable subject matter. Pl.'s Resp. 11.

Plaintiff first argues that the Special Master did in fact focus on the claim language in arriving at this conclusion, rather than just relying on the specification as Defendant contends. *Id.* at 11–12. Plaintiff continues by noting that, in any event, it was permissible for the Special Master to look to the specification for explanation as to how the claim language showed a technological improvement. *Id.* at 12 (citing *Enfish, LLC*, 822 F.3d at 1337). Plaintiff next argues that Defendant mischaracterizes the scope of the Special Master’s findings: “MicroStrategy . . . incorrectly argues that the Special Master found that the only feature in the asserted ’172 claims that is not clear in the prior art is the ordered process steps in [C]laim 1. . . . To the contrary, the Special Master found that there were multiple factual disputes as to whether the prior art disclosed various parts of the [Claim 1] limitation.” *Id.* at 12–13. Plaintiff then provides caselaw purporting to support its position that patent claims relating to databases or data processing cover patentable subject matter. *Id.* at 13 (collecting cases).

Thereafter, Plaintiff argues that Defendant’s “criticism of the Special Master’s *Alice* step two analysis is also misplaced,” insofar as “the data structures in [C]laim 1 that the Special Master [referred] to are readily apparent from his decision,” contrary to Defendant’s arguments. *Id.* at 13–14. Plaintiff also asserts that it presented sufficient evidence from its expert and named inventors that the asserted claims of the ’172 Patent cover “novel and unconventional structures.” *Id.* at 14.

Lastly, Plaintiff argues that “MicroStrategy fails to identify any error in the Special Master’s determination that MicroStrategy failed to show that [C]laim 1 is representative of the other asserted claims.” *Id.* Plaintiff therefore contends that the Special Master correctly denied summary judgment as to those claims, given that Defendant had the burden of showing representativeness. *Id.*



*d. The Court's Analysis*

The Court agrees with the Special Master that Defendant has failed to show that the '172 Patent is ineligible for patent protection, and therefore adopts the Special Master's recommendation denying Defendant's Motion for Summary Judgment on this issue.

To determine whether a patent claims patent-eligible subject matter, courts must engage in the two-part *Alice* test. *See Alice Corp. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014) (citing *Ass'n Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). In step one, courts must determine whether the claims in question are directed toward a patent-ineligible concept. *Id.* (citing *Mayo Collaborative Servs. v. Prometheus Lab'ys*, 566 U.S. 66, 76–78 (2012)). If the answer to this first question is yes, courts must “then ask, ‘what else is there in the claims before us? . . . To answer that question, we consider the elements of each claim both individually and ‘as an ordered combination’ to determine whether the additional elements ‘transform the nature of the claim’ into a patent-eligible application.” *Id.* (citing *Mayo Collaborative Servs.*, 566 U.S. at 78). This two-step analysis is intended to be “a search for an “‘inventive concept’”—i.e., an element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.” *Id.* (citing *Mayo Collaborative Servs.*, 566 U.S. at 73). Finally, patents are presumptively valid *and* eligible. *See Cellspin Soft, Inc. v. Fitbit, Inc.*, 927 F.3d 1306, 1319 (Fed. Cir. 2019); 35 U.S.C. § 282(a). In turn, the burden of establishing invalidity—or non-eligibility—of a patent therefore rests with the challenging party. *See Cellspin Soft, Inc.*, 927 F.3d at 1319; 35 U.S.C. § 282(a).

Returning to the parties' arguments, the Special Master provides a helpful summary:

Defendant contends that aggregating data by determining trends, a maximum, a minimum, or a summation is an age old mathematical concept while Plaintiff contends that the '172 Patent “teaches and claims innovative and unconventional

data structures that improved the way database systems could dynamically combine and filter data within or across disparate, networked data structures.”

R&R 47. Conducting its own review, the Court concludes that Defendant is not entitled to summary judgment on the issue of patent eligibility for the ’172 Patent.

Beginning with *Alice* step one, the Court agrees with the Special Master that Defendant has failed to show that Claim 1 of the ’172 Patent is directed toward a patent-ineligible concept. *See* R&R 47. Claim 1 of the ’172 Patent, when read in conjunction with the specification of the ’172 Patent,<sup>13</sup> discloses unique data structures and techniques aimed at solving issues with existing computing systems. Rather than just describing abstract ideas and mathematical concepts running on a computer, the claims (and specification) outline “specific improvement[s] to the way computers operate” and “improvement[s] to computer functionality itself.” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016). Specifically, Claim 1 discloses a novel system for generating aggregate data values from data stored in a data source. In turn, the accompanying specification describes why such a system provides tangible improvements in computer and databases functionality. *See, e.g.*, ’172 Patent, ECF No. 122-2, at 3:6–17, 3:21–33, 13:32–47, 21:52–67.<sup>14</sup> Claims directed toward such improvements are not merely directed toward an abstract idea within the meaning of *Alice*, and are therefore patent eligible. *See TecSec, Inc v. Adobe Inc.*, 978 F.3d 1278, 1293 (Fed. Cir. 2020) (holding that claims directed toward specific

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<sup>13</sup> The Court agrees with Plaintiff that claims may be read in light of and in conjunction with the patent specification. *See Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016) (noting that the *Alice* step-one inquiry “applies a stage-one filter to claims, considered *in light of the specification*.”) (emphasis added); *see also CardioNet, LLC v. InfoBionic, Inc.*, 955 F.3d 1358 (Fed. Cir. 2020) (indicating that specifications may be relied upon in the *Alice* inquiry, but that the specification must generally yield to the claim language); *TecSec, Inc.*, 978 F.3d at 1294 (analyzing the relevant claims in light of the specification).

<sup>14</sup> The Court generally uses the pagination assigned by the CM/ECF system when citing to record documents. However, for citations to both the ’172 and ’076 Patents, the Court instead utilizes the pagination appearing on the original documents.

improvements in computer functionality are patent-eligible, as are claims directed toward solving a specific problem in computing); *Enfish, LLC*, 822 F.3d at 1336 (same).

Defendant cites numerous cases purportedly supporting its contrary position that claims specifically relating to databases or data processing are ineligible for patent protection. *See* Def.'s Obj. 28 (collecting cases). Plaintiff cites a litany of cases in its Response, all pointing in the opposite direction. *See* Pl.'s Resp. 13. Viewed in light of *Enfish*'s directive to avoid categorically deeming improvements in computer software ineligible, this Court finds that the claims here fall closer to the patent-eligible line of cases presented by the Plaintiff. *See Enfish, LLC*, 822 F.3d at 1335. While a close question, the functionalities and improvements disclosed in the '172 Patent more closely track the sort of claims previously found eligible because they likewise disclose new, inventive methods directed at specific, measurable improvements upon the status quo. *Compare, e.g., Enfish, LLC*, 822 F.3d at 1335–36 (holding that certain claims in a patent directed toward information management and database systems were patent eligible, as they were not merely directed toward an abstract idea), *and TecSec, Inc.*, 978 F.3d at 1294–95, 1297 (holding that claims directed to a system for restricting access to computer data constitute patent-eligible improvements to the basic functioning of computer data distribution networks), *with, e.g., Elec. Power Group, LLC v. Alstom S.A.*, 830 F.3d 1350, 1354–1356 (Fed. Cir. 2016) (holding that claims describing systems and methods for performing real-time performance monitoring of electric power grids were not patent-eligible, insofar as the claims did not advance any “particularly assertedly inventive” techniques for performing those functions), *and SmarTEN LLC v. Samsung Elecs. Am., Inc.*, 316 F. Supp. 3d 913, 920–21 (E.D. Va. 2018), *aff'd*, 753 F. App'x 911 (Fed. Cir. 2019) (holding that claims in patents for hand-held mobile weight and exercise management computing device were not patent-eligible, insofar as they did not utilize a new source of data, new techniques

for analyzing that data, nonconventional components or methods, or nonconventional arrangements of conventional components and methods). Accordingly, the Court need not reach *Alice* step two, because Defendant failed to carry its burden of showing that the '172 Patent is ineligible for patent protection.

The Court reaches a similar conclusion regarding Claim 7 of the '172 Patent. Defendant did not explicitly object to the Special Master's determination that Claim 1 is representative of Claim 7. Likewise, Defendant did not explicitly object to the Special Master's overall conclusion that Defendant failed to adequately prove that Claim 1 was not representative of Claims 2, 4, 5, and 6. These conclusions are therefore reviewed for clear error. *See Daedalus Blue, LLC v. MicroStrategy Inc.*, 2023 WL 4707994, at \*1 (E.D. Va. July 24, 2023) (reviewing non-objected-to portions of Special Master's report and recommendation for clear error). Finding no clear error on the record, the Court adopts the Special Master's open-ended conclusion as to representativeness. Therefore, the Court finds that (1) Defendant failed to show that Claim 7 is patent-ineligible, and (2) fact issues exist regarding the remainder of the claims.<sup>15</sup>

The Court will overrule Defendant's objection on this issue and adopt the Special Master's recommendation to deny summary judgment as to the '172 Patent's eligibility in its entirety.

## 2. The '076 Patent

Defendant's position on summary judgment is that (1) Claim 6 of the '076 Patent is ineligible for patent protection, and (2) Claim 6 is representative of the remainder of the '076 Patent's claims, rendering them ineligible for protection as well. The Special Master found that Defendant has not shown, on the basis of undisputed facts, that the '076 Patent is ineligible as a

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<sup>15</sup> Either Defendant is correct and Claim 1 is indeed representative of Claims 2, 4, 5, and 6, rendering them eligible, or fact issues exist regarding Claim 1's representativeness of the remainder of the claims, rendering summary judgment for Defendant inappropriate.

matter of law, and therefore summary judgment should be denied. For the reasons set forth below, once again the Court agrees.

*a. Special Master's Conclusion*

The Special Master likewise conducted a patent eligibility inquiry regarding the '076 Patent, and concluded that the '076 Patent does not lack patent-eligible subject matter. Based on this finding, the Special Master recommended denying Defendant's summary judgment motion as to this issue. *See* R&R 56–63.

The Special Master's finding on *Alice* step 1—that the '076 Patent is directed toward a patent-eligible concept—was largely rooted in the same reasoning employed in analyzing the patent eligibility of the '172 Patent. *Compare id.* at 56–63 with *id.* at 47–54. The Special Master first considered Claim 6 of the '172 Patent, and found it was “not directed toward an abstract idea [but] rather . . . ‘an improvement to [database] functionality itself.’” R&R 57 (quoting *Enfish, LLC*, 822 F.3d at 1336). The Special Master again referenced various portions of the specifications of the '076 Patent as support for his conclusion. *See, e.g., id.* (“The specification of the '076 Patent repeatedly describes how the claimed invention is an improvement to database functionality.”) Finally, the Special Master once again noted that “Defendant's characterization of the asserted claims . . . oversimplifies the claims, and . . . ignores how the claimed solution improves then-existing database technology.” *Id.* at 58.

Next, the Special Master considered *Alice* step two—whether Claim 6 of the '076 Patent contains an inventive concept. *See id.* at 60–61. The Special Master began by again providing the caveat that *Alice* step two is only necessary where step one is not satisfied. *Id.* at 60 (citing *Enfish, LLC*, 822 F.3d at 1335 (quoting *Alice*, 573 U.S. at 218)). The Special Master then conducted the step two analysis and concluded that Defendant has not established the absence of a genuine

dispute of material fact with respect to whether Claim 6 of the '076 Patent contains an inventive concept (regardless of the step one outcome). *See id.* at 60–61. A few specific findings compelled this conclusion: (1) the '076 Patent discloses the “inventive concept of a ‘super role’ data structure that improved upon existing access control models . . . and provided for greater flexibility, *id.*”; (2) the specification of the '076 Patent “describes that ‘access control delegation flexibility is improved’ by registering super role instances,” *id.* at 61; and (3) regarding the prosecution history, the PTO’s rejection of different claims is insufficient to show there is no genuine dispute of material fact as to inventiveness. *Id.*

Lastly, the Special Master turned to the eligibility of the other claims of the '076 Patent as the aforementioned analysis pertained largely to Claim 6 of the '076 Patent. *See id.* at 56–61. The Special Master began by reiterating that he had already found Claim 6 of the '076 Patent to be patent eligible, or that, in the alternative, genuine issues of material fact existed as to eligibility. *Id.* at 62. Because Defendant agrees that Claims 1 and 12 are substantially similar and recite essentially the same limitations as Claim 6, the Special Master concluded that the same finding applied to those Claims. *Id.* at 62–63. The Special Master then provided alternative conclusions similar to those outlined with regard to the claims of the '172 Patent—either (1) Claim 6 is representative of Claims 2–3, 5, 7–9, 11, 13–15, and 17, rendering them patent eligible as well, or (2) a genuine issue of material fact exists as to whether Claim 6 is representative of Claims 2–3, 5, 7–9, 11, 13–15, and 17; in either scenario, granting summary judgment for Defendant would be improper. *Id.* at 63.

#### *b. Defendant’s Objections*

Defendant objects to the Special Master’s overall conclusion regarding eligibility of the '076 Patent, again arguing that the Special Master’s underlying reasoning constituted legal error.

Def.’s Obj. 29–31. Defendant first argues that the ’076 Patent “falls directly into a category of patents that the Federal Circuit has found invalid for being directed to ‘the abstract idea of providing restricted access to resources.’” *Id.* at 29 (quoting *Prism Techs. LLC v. T-Mobile USA, Inc.*, 696 F. App’x 1014 (Fed. Cir. 2017)). Defendant goes on to critique the Special Master’s opinion for neglecting to distinguish this binding precedent: “Indeed, he does not address [*Ericsson* and *Prism*], much less explain why the claims here warrant eligibility when the claims in those cases did not.” *Id.* at 29–30. Defendant also argues that the Special Master’s focus on the specification language rather than the *claim* language is legal error and renders his ultimate conclusion incorrect and inadequately supported. *See id.* at 30. Defendant also takes issue with the Special Master’s *Alice* step two analysis. *See id.* at 30–31. Defendant first contends that “the super role concept is abstract,” *id.* at 30, and cannot constitute an inventive concept as a matter of law. *Id.* at 30–31. Defendant also argues that, regardless, super roles are in the alleged prior art product—MicroStrategy 7.5—rendering them a non-inventive concept and thus ineligible for patent protection. *See id.*

Based on the above, Defendant concludes that “[t]he Special Master’s conclusory recommendations [regarding patent eligibility] should not be adopted, and instead summary judgment of invalidity under section § 101 should be granted.” *Id.*

### *c. Plaintiff’s Response*

In response, Plaintiff argues that “MicroStrategy’s criticisms of the Special Master’s findings on the section 101 issue for the ’076 Patent suffer from the same flaws discussed . . . with respect to the ’172 Patent.” Pl.’s Resp. 14. Specifically, Plaintiff argues that “it is readily apparent from the Special Master’s decision that he viewed the improvement of the ’076 Patent as the use of ‘super role’ structures to improve flexibility and reduce administrative complexity in controlling

access to resources in the system.” *Id.* 14–15. Plaintiff argues this improvement ties directly to the language of the asserted ’076 claims. *Id.*

With regard to the Special Master’s *Alice* step two analysis, Plaintiff notes that it has provided various pieces of expert evidence indicating that the “super role” data structure was an inventive and non-abstract concept at the time of the invention. *Id.* at 15. Plaintiff makes a similar contention with regard to the “nesting” of super roles according to an “externalisation state” portion of the claim. *Id.* In light of this evidence, Plaintiff argues that the Special Master was correct to conclude that a factual dispute exists regarding whether the ’076 claims satisfy step two of the *Alice* test, rendering summary judgment improper. *See id.* Finally, Plaintiff argues that the Special Master correctly determined that Defendant failed to carry its burden of showing that Claim 6 of the ’076 Patent is representative of the other asserted claims, rendering summary judgment improper on this issue as well. *See id.* at 15–16.

*d. The Court’s Analysis*

The Court finds that Defendant has likewise failed to show that the ’076 Patent is ineligible for patent protection. In turn, the Court adopts the Special Master’s recommendation denying Defendant’s Motion for Summary Judgment on the issue of ineligibility.

As previously outlined, courts must engage in the two-part *Alice* inquiry to determine whether a patent claims patent-eligible subject matter. *See Alice Corp. v. CLS Bank Int’l*, 573 U.S. 208, 216 (2014) (citing *Ass’n Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). First, courts must determine whether the claims in question are directed toward a patent-ineligible concept. *Id.* (citing *Mayo Collaborative Servs. v. Prometheus Lab’ys*, 566 U.S. 66, 76–78 (2012)). Courts only move on to step two if this first question is answered in the affirmative. *See id.* (citing *Mayo Collaborative Servs.*, 566 U.S. at 78). Step two involves a searching inquiry



aimed at determining whether the patent in question nevertheless involves an “inventive concept” entitled to patent protection. *See id.* (citing *Mayo Collaborative Servs.*, 566 U.S. at 78).

Turning to the parties’ arguments regarding the patent-eligibility of the ’076 Patent, the Special Master again provides a helpful summary:

Defendant contends that [the claims are] “directed to the abstract idea of providing restricted access to resources by assigning permissions to roles, grouping the roles together, and organizing the grouped roles” while Plaintiff contends that the ’076 Patent is directed towards “inventive and hierarchical data structures that improved the way access control systems could dynamically assign and track roles and permissions for access to computer resources.”

R&R 56 (quoting Def.’s Mem. Supp. 41; Pl.’s Opp’n 43–44). Conducting its own review, the Court likewise concludes that Defendant is not entitled to summary judgment on the issue of patent eligibility for the ’076 Patent.

Applying *Alice* step one, the Court agrees with the Special Master that Defendant has failed to show that Claim 6 of the ’076 Patent is directed toward a patent-ineligible concept. *See* R&R 57–58. Claim 6 of the ’076 Patent, when read in conjunction with the specification of the ’076 Patent, discloses nonconventional uses for super role structures aimed at improving, *inter alia*, flexibility and security. *See* ’076 Patent, ECF No. 122-2, at 8:29–49; *see also* R&R 57–58. For instance, the specification of the ’076 Patent describes that “access control delegation flexibility is improved” because “[s]uper role instances are registered for example at a protected resource hierarchy according to their super role nesting . . . [which] reduces administrative overhead.” *See* ’076 Patent at 4:32–35, 8:5–28; *see also* R&R 57. Additional “improvement[s] to computer functionality itself,” *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016), are also identified in the claims and specification, further solidifying the patent-eligible nature of the ’076 Patent. *See, e.g.*, ’076 Patent at 2:29–41, 3:41–60, 4:19–32, 4:32–35, 8:5–28, 8:29–49 (noting other ways the nonconventional super role data structure inventively improves security and

flexibility). As noted elsewhere, claims directed toward such improvements are not directed toward an abstract idea within the meaning of *Alice*, but instead are inventive, patent-eligible creations. *See, e.g., TecSec, Inc. v. Adobe Inc.*, 978 F.3d 1278, 1293 (Fed. Cir. 2020) (holding that claims directed toward specific improvements in computer functionality are patent-eligible, as are claims directed toward solving a specific problem in computing); *Enfish, LLC*, 822 F.3d at 1336 (same).

Defendant cites two cases for the proposition that claims directed toward the “abstract idea of providing restricted access to resources” are not eligible for patent protection. Def.’s Obj. 29–30 (citing *Prism Techs. LLC v. T-Mobile USA, Inc.*, 696 F. App’x 1014 (Fed. Cir. 2017); *Ericsson Inc. v. TCL Commc’n Tech.*, 955 F.3d 1317, 1327 (Fed. Cir. 2020)). Defendant argues that neither Plaintiff nor the Special Master adequately addressed or distinguished the present matter from those cases. *See* Def.’s Obj. 29–30. To be sure, neither Plaintiff nor the Special Master discussed either case at length. *See, e.g.,* Pl.’s Opp’n 43–45; R&R 56–58. However, the cases cited by Defendant are nonetheless inapposite.

*Prism*, for instance, concerned claims more generally related to computer security systems that did *not* contain nonconventional methods or components aimed at specific improvements to functionality. *See Prism Techs. LLC*, 955 F.3d at 1017–18. In turn, the Federal Circuit noted that Prism did not proffer a persuasive argument that “these claims cover[ed] a concrete, specific solution to a real-world problem.” *See id.* at 1017. Such is not the case here. As noted above, Plaintiff has provided substantial evidence that Claim 6 *does* disclose inventive, specific solutions to real-world issues concerning security, flexibility, and administrative costs involved with running these sorts of systems. *See* Pl.’s Opp’n 43–45; *see also* ’076 Patent at 2:29–41, 3:41–60, 4:19–32, 4:32–35, 8:5–28, 8:29–49.

Similarly, the court in *Ericsson* took issue with the fact that the claims made “generic functional recitations.” *Ericsson Inc.*, 955 F.3d at 1328. The court continued that “[m]erely claiming ‘those functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance [in technology or functionality],’ does not make a claim eligible at step one.” *Id.* (quoting *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016)). And while Defendant is correct that the *Ericsson* court indicated that “[c]ontrolling access to resources is . . . the sort of process that . . . [had] repeatedly [been] found unpatentable,” *id.* at 1327, the Federal Circuit in the same case cautioned against using any categorical rules to decide patent eligibility. *Id.* Here, the claim language is not of the generic sort taken to task by the *Ericsson* court. Instead, the claim language—coupled with the specification—specifically and concretely discloses improvements to functionality aimed at solving various real-world problems. *See* ’076 Patent at 2:29–41, 3:41–60, 4:19–32, 4:32–35, 8:5–28, 8:29–49 (specifically disclosing the nonconventional methods of the claims, and noting the ways in which the inventive super role data structure inventively improves, among other things, security and flexibility).

Based on these cases, the Court finds that Defendant has failed to establish that Claim 6 of the ’076 Patent covers patent-ineligible subject matter. And the same is true for Claims 1 and 12 of the ’076 Patent, given that Defendant did not explicitly object to the Special Master’s determination that Claim 6 is representative of Claims 1 and 12. Likewise, Defendant did not explicitly object to the Special Master’s overall conclusion that Defendant failed to adequately prove that Claim 6 was representative of the other asserted Claims 1–3, 5, 7–9, 11–15, and 17. These conclusions are therefore reviewed for clear error. *See, e.g., Strauch v. Computer Scis. Corp.*, No. 3:14-CV-956 (JBA), 2019 WL 7602150, \*2 (D. Conn. Aug. 6, 2019) (reviewing

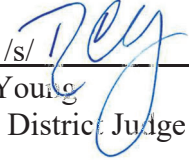
unobjected portions of the Special Master's report and recommendation for clear error). Finding no clear error on the record, the Court adopts the Special Master's conclusion as to representativeness. In sum, Defendant has failed to prove that Claims 1 and 12 are patent-ineligible, and fact issues exist regarding the remainder of the claims.<sup>16</sup>

The Court will therefore overrule Defendant's objection on this issue and adopt the Special Master's recommendation to deny summary judgment as to the '076 Patent's eligibility in its entirety.

#### IV. CONCLUSION

For the foregoing reasons, the Court will overrule Defendant's Objections, adopt the Special Master's R&R, and deny Defendant's Motion for Summary Judgment.

An appropriate Order will accompany this Memorandum Opinion.

  
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/s/ Roderick C. Young  
United States District Judge

Richmond, Virginia  
Date: September 25, 2023

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<sup>16</sup> Either Defendant is correct and Claim 6 is indeed representative of the remainder of the claims, rendering them subject to the same eligibility conclusion as Claim 6, or fact issues exist regarding Claim 6's representativeness of those claims, rendering summary judgment for Defendant inappropriate.